



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,695	03/05/2002	David A. Bottom	042390P11219	7431

59796 7590 04/20/2007

INTEL CORPORATION  
c/o INTELLEVATE, LLC  
P.O. BOX 52050  
MINNEAPOLIS, MN 55402

EXAMINER

HAUGHTON, ANTHONY MICHAEL

ART UNIT

PAPER NUMBER

2835

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/091,695

Applicant(s)

BOTTOM ET AL.

Examiner

Anthony M. Haughton

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6-9, 11-13, 15-17, 19 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, 11-13, 15-17, 19, and 22-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6-9, 11-13, and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Jackson et al.

#### **In Claim 1:**

A modular server system, comprising:

a midplane having a system management bus and a plurality of blade interfaces (column 4, lines 48-53, column 11, lines 58-60), the blade interfaces in electrical communication with each other;

a server blade (element 132) inserted into one of the plurality of blade interfaces on the midplane, the server blade having a server blade system management bus in electrical communication with the system management bus of the midplane (the server data bus and the midplane data bus cooperate allowing the server system to function, see, column 12, line 40 and column 13, line 59), and a network interface to connect to a network (column 5, 1-4); and

a plurality of switch blades to perform network switching wherein the plurality of switch blades are inserted into one of the plurality of blade interfaces on the midplane

Art Unit: 2835

(the interface cards can act as switch blades, see column 5, lines 1-4, column 7, lines 19-26, column 12, line 17 and column 13, line 18).

**In Claim 12:**

A modular server system, comprising:

a midplane having a system management bus, a first side, a second side, and a plurality of blade interfaces (column 4, lines 48-53, column 11, lines 58-60) on the first side and the second side, wherein the blade interfaces on the first side are in electrical communication with the blade interfaces on the second side;

a plurality of server blades, each server blade inserted into one of the plurality of blade interfaces on the first side of the midplane (column 11, lines 58-6), the server blades each having a server blade system management bus in electrical communication with the system management bus of the midplane (column 4, lines 48-53, column 5, lines 27-33), and a network interface to connect to a network (interface cards 134 may connect to a network, column 7, lines 19-26); a plurality of switch blades to perform network switching between any number of the server blades and between an external network (interface cards 134 may act as a network switch, see column 7, lines 19-26, column 13, lines 24-28), wherein at least two switch blades are inserted into one of the plurality of blade interfaces on the midplane (column 12, lines 55-58).

**In Claim 2:**

The modular server system according to claim 1, further including a power supply module (element 144) coupled to the midplane to provide power to the modular server system (column 8, lines 12-17).

**In Claim 3:**

Art Unit: 2835

The modular server system according to claim 1, further including a cooling fan module (element 140) coupled to the modular server system to cool the modular server system (column 7, lines 66-2).

**In Claims 4 and 13:**

The modular server system according to claims 1 (regarding claim 4) and 12 (regarding claim 13) further including a plurality of media blades each inserted into to one of the plurality of blade interfaces on the second side of the midplane (column 12, lines 55-58), the media blades each having at least one storage medium device (interface cards 134 can act as a media blade when interfacing with a hard drive or other media types, see column 5, lines 1-4, column 7, lines 19-26, and column 8, lines 44-47).

**In Claims 6 and 15:**

The modular server system according to claims 4 (regarding claim 6) and 13 (regarding claim 15) further including, wherein the at least one storage medium device of the at least one media blade is a hard disk drive (column 5, lines 1-4, column 7, lines 19-26).

**In Claim 7:**

The modular server system according to claim 1, further including a chassis (element 110) to house the midplane, the server blade, and the plurality of switch blades. (column 7, lines 16-65).

**In Claims 8 and 16:**

The modular server system according to claims 1 (regarding claim 8) and 12 (regarding claim 16) further including, wherein the server blades, the switch blades, and the media blades are hot swappable (column 5, lines 18-20).

**In Claims 9 and 17:**

The modular server system according to claims 4 (regarding claim 9) and 13 (regarding claim 17) further including, wherein the server blades and media blades are operable to be used as single or multiple server systems (see column 5, lines 33-53, the scalable dynamic system can utilize any number of server blades and storage media as a plurality of server systems).

**In Claim 11:**

The modular server system according to claim 4, wherein the at least one media device is selected from the group consisting of a storage medium device, a graphics processing device, an audio processing device, and a streaming media processing device (the media device is a storage medium device, see column 5, lines 1-4, column 7, lines 19-26, column 8, lines 44-47).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19 and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson et al. (US – 6,452,809) in view of Gallagher et al. (US – 5,971,804).

**Considering Claim 19:**

With respect to claim 19, Jackson teaches a midplane having a system management bus, a first side, a second side, and a plurality of blade interfaces (column 4, lines 48-53, column 11, lines 58-60) on the first side and the second side, the blade interfaces

Art Unit: 2835

on the first side are in electrical communication with the blade interfaces on the second side; a server blade inserted into one of the plurality of blade interfaces on the first side of the midplane, the server blade having a server blade system management bus in electrical communication with the system management bus of the midplane (column 4, lines 48-53, column 11, lines 58-60), and a network interface to connect to a network (interface cards 134 may connect to a network, column 7, lines 19-26); a media blade inserted into one of the plurality of blade interfaces on the second side of the midplane (interface cards 134 can act as a media blade when interfacing with a hard drive or other media types, see column 5, lines 1-4, column 7, lines 19-26, and column 8, lines 44-47), the media blade having at least one storage medium device (column 5, lines 1-4, column 7, lines 19-26); a second server blade inserted into one of the plurality of blade interfaces on the first side of the midplane (plurality of blades column 7, line 18), the second server blade having a second server blade system management bus in electrical communication with the system management bus of the midplane, and a second network interface to connect to the network a second media blade removably connectable to one of the plurality of blade interfaces on the second side of the midplane (each blade 132 may have dedicated interface cards 134, column 7, lines 19-26, column 11, line 48 and column 13, line 59), a second media blade inserted into one of the plurality of blade interfaces on the second side of the midplane, the second media blade having at least one second storage medium device; least two switch blades to perform network switching between the first and second server blades, any other server blade inserted into one of the plurality of blade interfaces on the first side of the midplane, and an external network (interface cards 134 may act as a network switch, see column 7, lines 19-26, column 13, lines 24-28), the at least two switch blades

Art Unit: 2835

inserted into one blade interface on the midplane (column 12, lines 55-58); a power supply module (element 144) coupled to the midplane to provide power to the modular server system; a cooling fan module (element 140) coupled to the modular server system to cool the modular server system; and a chassis (element 110) to house the midplane, the server blade, the media blade, the second server blade, the second media blade, the switch blades, the power supply module, and the cooling fan module, the server blade, the media blade, the second server blade, the second media blade and the switch blades share power from the power supply module and to share cooling from the cooling fan module. Jackson lacks teaching wherein the network interface includes a network connector jack accessible through a faceplate on the server blade. Gallagher teaches a server blade (element 28) with a network interface that includes a network connector jack accessible through a faceplate on the server blade (column 11, lines 16-24, Fig. 5H, 7). It would have been obvious to a person of ordinary skill in the electrical art to combine the server system of Jackson with the redundant network connections of Gallagher for the benefit of improved reliability.

**In Claim 21:**

The modular server system according to claim 19, wherein the at least one storage medium device of the at least one media blade is a hard disk drive (column 5, lines 1-4, column 7, lines 19-26).

**In Claim 22:**

The modular server system according to claim 19, wherein the server blades, the switch blades, and the media blades are hot swappable (column 5, lines 18-20).

**In Claims 23, 24, 25, and 26:**



The modular server system according to claim 19, wherein the server blades and media blades are operable to be used as single or multiple server systems (see column 5, lines 33-53, the scalable dynamic system can utilize any number of server blades and storage media as a plurality of server systems).

### ***Response to Arguments***

3. Applicant's arguments filed 31 October 2006 have been fully considered but they are not persuasive.

4. **In regards to the arguments for and amendments to claim 1**, Jackson describes all the elements cited and emphasized by the applicant. Jackson does teach a plurality of switch blades inserted into one interface on the midplane as cited in claim 1. As described by Jackson element 134 represents a network interface card (column 5 lines 1-4), which is described as being capable of containing communication switches (column 7 lines 19-26) which shows that each individual network interface card contains a plurality of communication switches representing the plurality of switch blades. As seen in figure 16 the midplane contains blade interfaces on both the front and back ends of the element, where the server blade known as element 132 is inserted into the front end and the network interface card element 134 containing the plurality of switches is inserted into one interface on the midplane. Therefore, Jackson does disclose all above features of the instantly claimed invention in amended claim 1.

5. **In regards to the arguments on prior art Gallagher**, it is not needed that Gallagher teach or suggest switch blades inserted into one interface on the midplane as that limitation has already been taught by Jackson as described above. It does teach the limitations in claim 19 that Jackson fails to teach, and is analogous art with proper

Art Unit: 2835

motivation to combine the two prior art references as described in the 35 U.S.C. 103(a) rejection on base claim 19 as described above.

**6. In regards to the arguments for and amendments to claims 12 and 19, since** claims 12 and 19, as disclosed by the applicant, also include elements similar to a plurality of switch blades inserted into one interface on the midplane as emphasized in claim 1 they both are disclosed by the prior art Jackson and Gallagher and therefore rejected as seen in the above Office Action.

**Conclusion**

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mistry et al	(US – 5,488,541)
Ayd et al	(US – 6,025,989)
Khan et al	(US – 6,035,356)
Hipp et al	(US – 6,411,506)
Heath et al	(US – 6,564,274)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony M. Haughton whose telephone number is 571-272-9087. The examiner can normally be reached on 8:30 - 6:00 EST 1st Friday Off.


Art Unit: 2835

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash N. Gandhi can be reached on 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anthony M Haughton  
Examiner  
Art Unit 2835

AMH

  
4/11/02  
JAYPRAKASH GANDHI  
SUPERVISORY PATENT EXAMINER